

Frozen Salt

Grade Levels:

7-9

Question:

Does adding salt to water lower its freezing point?

Possible Hypothesis:

Adding salt does/does not lower the freezing point of water.

Materials:

Four 8-ounce plastic cups

Measuring cup

Box of table salt (sodium chloride)

Freezer

Thermometer

Teaspoon

Procedure:

1. Fill four cups with six ounces each of tap water. Add a teaspoon of salt to one cup, two teaspoons to another, and three teaspoons to a third. Leave the fourth as your control.
2. Place the cups in the freezer. Observe the cups periodically until a thin layer of ice forms on the top of the water, and then record the temperature of each cup.
3. Record your observations.

Analysis and Conclusion:

Did adding salt lower the freezing temperature of the water? What was the effect of adding more salt to the water? Can you think of ways that this knowledge can be put to work for you?

